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ABSTRACT

The entry of working welfare mothers into the labor market will have an impact on the wages and employment of low-skilled workers. This impact was examined through a labor market analysis of available statistical data about the U.S. population and employment patterns. The characteristics of workers likely to enter the labor market because of welfare reform were considered along with the following mediators of the effects of welfare mothers' entry into the labor market: the size of the labor influx, the characteristics of welfare mothers, the state of the economy, migration, and institutional arrangements. The analysis revealed that a 10% increase in the number of working welfare recipients could result in a 0.3% wage decrease for men who were born in the United States and do not have a high school diploma. The analysis did not reveal any discernible short-term negative effects of the public assistance group on low-skilled women. In the long run, however, welfare reform will likely increase the number of low-skilled U.S.-born women in the labor force and thus drive down their wages by as much as 2.2%. The

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claim that immigrants take wage opportunity away from welfare participants appeared to be unfounded. (Six endnotes and twenty-eight references are included.) (MN)

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Will Welfare Reform Hurt Low-Skilled Workers?

María E. Enchautegui

01–01

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Assessing the New Federalism

An Urban Institute Program to Assess Changing Social Policies

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Assessing the New Federalism

Assessing the New Federalism is a multi-year Urban Institute project designed to analyze the devolution of responsibility for social programs from the federal government to the states. It focuses primarily on health care, income security, employment and training programs, and social services. Researchers monitor program changes and fiscal developments. Alan Weil is the project director. In collaboration with Child Trends, the project studies changes in family well-being. The project provides timely, nonpartisan information to inform public debate and to help state and local decisionmakers carry out their new responsibilities more effectively.

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Abstract

Welfare reform is expected to send hundreds of thousands of women to work. This paper evaluates whether the entrance of welfare recipients into the labor market might result in a decline in wages and employment of other low-skilled workers. An increase in the number of ex-welfare mothers may drive down the wages and employment of U.S.-born workers without a high school degree. Specifically, a 10 % growth in the number of working welfare recipients reduces the employment of low-skilled U.S.-born men by 2 % and reduces their wages by .3 %. Immigrants, the most important source of growth in low-skilled labor, do not pose a challenge to the labor market absorption of welfare recipients. The most adverse effects of an increased number of working welfare mothers comes from the high sensitivity of these women, and women with low educational levels in general, to their own labor supply.

Table of Contents

Will Welfare Reform Hurt Low-skilled Workers 1

Welfare Mothers and Other Workers in the Workplace 2

Mediators of the Effects 4

How Many Workers Does Welfare-Reform Add to the Labor Force 6

Are Welfare Mothers Different from Other Low-skilled Workers? 10

Estimating the Relationship Between Different Types of Workers 11

The Share of Workers in the Workforce 14

Estimated Effects of Welfare Mothers on Other Workers 15

Looking to the Future 19

Endnotes 21

References 23

About the Author 26

Will Welfare Reform Hurt Low-skilled Workers?

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) will place hundreds of thousands of women in the labor market. The exact number is difficult to ascertain, but the federal mandate is that 25 percent of adult welfare recipients with children over age 1 be engaged in work-related activities in fiscal year 1997 and 30 percent in fiscal year 1998. About 20 percent can be exempted from time limits, not work requests. In 1997 there were 1.2 million women ages 18 to 54 with children ages 0 to 5 in welfare.[1] Adding the 25 percent to the 1997 welfare population, and subtracting the exempted cases, could mean up to 240,000 additional workers in the labor market. But the increase in the labor force will be larger because some welfare users will not participate in work-related programs because of time limits and will join the labor force as they are pushed out of assistance. Further, welfare is now less attractive, and many women who might have entered welfare (and not the labor market) had the stricter regulations not been in effect will be joining the labor force.

Entering the workforce has important economic, psychological, and familial consequences for welfare participants themselves. But, does it also mean that low-skilled workers already in the labor force will be hurt?

Welfare participants entering the market will increase competition for scarce jobs, which may hurt the wages and employment chances of other low-skilled workers. If this is the case, it is certainly an unintended negative consequence of welfare reform, low-skilled workers have already had their share of economic adversity. Their employment and wage performance during the past two decades has been poor. The low-skilled labor market is characterized by low wages, employment

instability, and little opportunity for advancement, (Acs and Danziger 1993, Blackburn, Bloom, and Freeman 1990, Holzer 1996, Pavetti 1997). The negative wage and employment consequences of welfare reform on other low-skilled workers are especially unfortunate considering that reform does not seem to produce clear winners. Various studies have shown that welfare-to-work programs are unlikely to move ex-welfare mothers out of poverty, and that their earnings will not be enough to compensate for transportation, child care, and other costs associated with labor market involvement (Acs, Coe, Watson, and Lerman 1998, Jencks and Edin 1990, Pavetti and Acs 1997). Welfare "leavers" are more likely than other low-income mothers to report serious economic struggles in providing food and paying rent (Loprest 1999).

The following section discusses the mechanisms by which welfare mothers might affect other low-skilled workers and presents data that estimate the size of the influx and its labor market effects.

Welfare Mothers and Other Workers in the Workplace

The idea that the influx of ex-welfare mothers can have an effect on other low-skilled workers can be treated within the context of previous labor market studies. Whenever there is a substantial increase in the number of a type of worker, labor economists have sought to identify whether and how this increase hurts the wages and employment of groups already in the labor force. During the seventies, the rapid entrance of women into the labor market led to exploration of how women and other demographic groups relate to each other in the labor market (Grant and Hamermesh 1981). This research indicated that the "white female labor force has hurt the earnings prospects of young workers." The influx of college - educated baby boomers has been analyzed by Freeman (1989). In the 1980s the imminent growth in the immigrant workforce raised the question of how this workforce would affect other low-skilled workers. The conclusion was that immigrants

have a small negative effect on the wages of native low-skilled workers (Borjas 1987, LaLonde and Topel 1991).

To address the question of whether or not other low-skilled workers will be hurt by ex-welfare participants entering the workforce, we need to know how they relate to each other in the workplace. Basically there are two choices: Ex-welfare participants either substitute for other workers or they complement them. If they are substitutes, an increase in the number of working welfare participants would displace other workers or reduce their wages. The rationale for displacement is as follows: New entrants will have to demand lower wages than workers already in the labor market in order to find employment; employers will release the most expensive workers and hire instead the newly arrived workers because the latter are substitutes for the former and are cheaper; and the employment and wages of other low-skilled workers will suffer. The more newly arrived substitutes there are for the older workers, the more room there is for wage and employment declines of those already in the labor force.

However, the impacts of working welfare participants need not be negative. Welfare participants and other low-skilled workers may be used together in the production process. Instead of competing, ex-welfare mothers may complement the work activities of other low-skilled workers, and displacement or wage decline occurs. Typically, workers with different skill levels are used together in the workplace. A greater number of working welfare participants would mean that more of the workers for whom the welfare mothers are complements will be hired. The more they

complement each other, the greater the increase in wages and employment brought about by the increase in the number of ex-welfare participants.

Mediators of the Effects

The theoretical effects that welfare reform may have on the wages and employment of nonwelfare, low-skilled workers are mediated by a broad set of circumstances. It is difficult, and not always possible, to control for all these factors. The size of the labor influx, the characteristics of welfare mothers, the state of the economy, migration, and institutional arrangements all contribute to whether welfare mothers will adversely affect other workers. Obviously, a small injection of new workers can pass without notice; a large influx poses more challenges. The more similar welfare participants are to other low-skilled workers in terms of skills, the greater the potential for substitution and the greater the negative effects of welfare reform. A growing economy can more easily absorb new workers, reducing the pressure they place on the labor market. The following sections contain information about the estimated size of the influx, the characteristics of welfare mothers, and the effect of the economy.

Migration of welfare workers or of the potentially affected workers also affects the pressure that new workers add to the labor market. If the potentially affected workers or new entrants migrate to other labor markets, there would be less employment and wage pressure in the labor market left behind. It is unlikely however, that migration is a big factor in welfare reform effects. Welfare participants and single mothers have lower mobility rates than other groups (Enchautegui 1997). The low geographic mobility of this population is related to their low levels of education and their geographically based support networks. Welfare reform may add to the migration-inhibiting behavior of poor single women—at least in the short run—as it often entails the provision and coordination of postwelfare services through one agency. Welfare participants may prefer to stay in their area to continue receiving the welfare-to-work services offered by their local offices. The out-migration

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of other workers to avoid competition from welfare mothers is also unlikely because all labor markets throughout the U.S. are being affected by welfare reform.[2]

Institutional arrangements such as discrimination, affirmative action policies, minimum wage, and government wage subsidies are also important in considering the effects of welfare reform on the labor market because they affect the extent to which employers can substitute one type of worker for another. They also affect the extent to which wages and employment can adjust to shifts in the number of workers. For instance, minimum wage may mean that employers' adjustments to an increase in the number of welfare recipients may manifest through unemployment rather than through wage declines. Wage subsidies, at times mentioned to promote the employment of ex-welfare recipients (Holtz-Eakin and Dickert-Conlin 1998), also facilitate the displacement of other similar workers because subsidies make welfare mothers more attractive by reducing their labor cost. If, instead of wage subsidies, the environment is one of discrimination, the discriminated-against worker is *a priori* declared nonsubstitute with other preferred labor groups. On the other hand, racial preferences affect the ability of employers to substitute away from the class of protected workers and toward the newcomers (Griffin 1992, 1996).

There is little empirical information that might shed light on how these arrangements affect the relationship among workers under welfare reform. While there is information on wages and employment, patterns of discrimination or racial preferences for a broad range of metropolitan areas remain largely unknown. It is also difficult to gauge to what extent wage regulations are actually put in place and the way they are implemented. The issue has not being brought up in other studies, with the exception of Griffin (1996) in the case of affirmative action.

How Many Workers Does Welfare-Reform Add to The Labor Force?

One of the immediate effects of welfare reform is the addition of workers to the labor force. Because of the few postreform years and the improvement of the economy during PRWORA, how many workers welfare reform is adding to the labor force can only be estimated with error.

Using data from the March Current Population Surveys, I calculated the labor force participation rate of women ages 18 to 54 with children ages 0 through 5. A woman is classified as a labor force participant if she worked at least one week or looked for work at all during the year. Participation on assistance is also based on yearly information and refers to receipt of Aid to Families with Dependent Children and Temporary Assistance for Needy Families (AFDC/TANF) funds or other cash assistance, excluding Supplemental Security Income, the year before the survey. This information is in table 1.

The growing labor market involvement of welfare recipients can be seen clearly in the labor force participation figures. The labor force participation of women on public assistance remained nearly unchanged at 43 percent from 1977 to 1992. It started growing in the first half of the 1990s and reached 59 percent in 1997. The 10 percentage point increase in labor force participation of welfare mothers contrasts with the 2 percentage point increase for women not on assistance during the same period. The increase in labor market involvement is also higher for single women and for the low educated than for other populations.

Figure 1 shows the number of women on welfare and the number on welfare and participating in the labor market. Between 1994 and 1997, the number on welfare dropped by 33 percent from 1.8 million to 1.2 million. The number on welfare and in the labor force dropped from 915,000 to 704,000.

The declining welfare numbers *before* welfare reform (pre-1996) suggest that some women receiving welfare would have entered the labor force anyway for reasons unrelated to PRWORA. The two main reasons are the better economy and welfare waivers implemented across different states.

Welfare reform produces three types of new labor force participants: (1) those who are required to be working while in the program; (2) those who leave the welfare program because of time limits or any new reform hurdle and join the labor force; and (3) those who entered the labor force but would rather remain on welfare and not participate in the labor market but for the reform's stricter regulations. In evaluating any of these three categories, one must consider that labor force participation of welfare mothers was on the rise before welfare reform, possibly because of the better economy (hereafter called the economy) or the welfare waivers.

To estimate the number of new labor force participants resulting from welfare reform, I use data from the March Current Population Survey. These data are cross-sectional and give information on welfare use only at one point in time: the income year of the survey. Welfare use occurring before the income year of the survey cannot be ascertained. Information on labor force activity for the income year is also available but is not necessarily concurrent with information on welfare use. For instance, a woman might have been on welfare the first part of the year, then left welfare and joined the labor force the second part of the year. With these limitations in mind, category 1 can be defined as women on welfare and in the labor force the income year of the survey. Categories 2 and 3 cannot be differentiated from each other; all that is known is that women in these two categories are not on welfare. For the purpose of these estimates, it is assumed that they were not on welfare during the income year of the survey.

My first estimate comprises categories 2 and 3 (i.e., additions to the labor force because welfare became less attractive or because participants were pushed out of the program more than a year ago), net of the growing economy. To parcel out the effect of the growing economy, I predict the number of labor market entrants by first applying the prereform welfare participation rate to the postreform year and then applying a reasonable labor force participation rate to the difference.

Table 2 shows the results of the predicted number of labor force entrants attributed to welfare reform. The base population are women ages 18 to 54 with children ages 0 to 5. Between 1993 and 1995 (the prewelfare reform period), welfare participation rates among these women declined by an average of 1 percentage point per year. Welfare participation rates were 13.6 percent in 1993, 12.4 percent in 1994, and 11.6 percent in 1995. From 1995 to 1996 and from 1996 to 1997, welfare participation rates declined an average of 1.7 percentage points per year, from 11.6 to 10.2 to 8.2. percent. If the prewelfare reform trends in welfare participation had continued, the welfare participation rate would have been 9.6 percent in 1997 instead of the actual 8.2 percent. That is, 11.6 percent - 1 percent = 10.6 percent in 1996, and 10.6 percent - 1 percent = 9.6 percent in 1997. Applying the 9.6 percent welfare participation rate to the base population in 1997, I concluded that there would had been 1.4 million women on welfare in 1997 instead of the actual 1.19 million. In 1996, there were 1.48 million women on welfare. The 1996 - 97 decline in the number of welfare recipients would have been 80,000 instead of the actual decline of 288,000 if the prewelfare reform trends had continued. The good economy then produced a reduction of 80,000 in the number of welfare recipients. Welfare reform, by pushing women out of assistance or by discouraging its use, was responsible for a decline in welfare use by 208,000 (i.e., 288,000 minus 80,000). According to these estimates, 28 percent of the decline in welfare use is attributed to the economy. Studies reviewed by Schoeni and Blank (2000) for pre-1996 attribute 30 to 40 percent of the caseload

decline to the economy, while a study by the Council of Economic Advisors (1999) for 1996 attributes only from 8 to 10 percent to the better economy.

The 207 thousand women who did not use welfare may or may not participate in the labor market. I assume a conservative participation rate of 67 percent—the participation rate of single women not on welfare during the year with children 0 to 5 and with less than a high school diploma. Applying the 67 percent labor force participation rate to the 207,000, I calculate that 139,000 women were added to the labor force because welfare reform prevented their entrance to the program or because reform pushed them out of welfare and into the labor force.

The other components of the new labor force entrants are those on welfare and in the labor force under the new regulations. If the prereform trend had continued, the labor force participation rate of women on welfare would have been 49 percent. Instead, it was 59 percent in 1997. If 49 percent of welfare mothers had been in the labor force in 1997, there would had been 587,000 working welfare participants. The actual number, however, was higher—704,000. The additional working welfare participants should be attributed to welfare reform; therefore, 117,000 (i.e., 704,000 minus 587,000) participants were added from concurrent participation in welfare and the labor market or from welfare use and participation the same year.

Putting these numbers together, I estimated that welfare reform may have added about 256,000 women to the labor force between 1996 and 1997. This represents about 2 percent of the 1997 female labor force participants 18 to 54 with preschool age children.

The other figures available about the influx into the labor force occasioned by welfare reform are those of Lerman, Loprest, and Ratcliff (1999). These authors obtained an increase of 43,000 or 162,000, depending on the assumptions. However, their estimates are only for 20 metropolitan areas,

do not allow for labor force entries that would have occurred anyway because of the better economy, and do not account for labor force entries resulting from welfare cases that were averted.

Are Welfare Mothers Different from Other Low-skilled Workers?

The more similar working welfare mothers are to other workers, the higher the potential for displacement. Whether or not welfare recipients systematically differ from other low-skilled workers affects the extent to which these two groups are interchangeable in the workplace. Researchers tend to see welfare recipients as low skilled. Pavetti and Acs (1997), for instance, examined the prospects of ex-welfare women in the labor market based on the experience of women without a high school degree, with minor children, and who have had a child before age 18. Loprest (1999) compares welfare leavers to single women with a high school diploma.

To explore what type of skills welfare recipients bring to the workforce, table 3 shows their educational attainment from 1977 to 1997. The 1990s brought drastic improvements in the educational attainment of welfare recipients. The percentage of welfare recipients without a high school diploma dropped from more than half during the 1970s and 1980s to around 40 percent in the 1990s. Although welfare recipients are commonly thought of as low skilled, during the 1990s about one in every five of these recipients had some type of college education, but welfare mothers tend to be less educated than nonwelfare mothers. The proportion of welfare mothers without a high school diploma is more than three times that of nonwelfare mothers.

Welfare participants may also differ from other low-skilled workers in terms of difficult-to-measure skills called "soft skills," and may also have fewer skills than other workers. In their study of job prospects for welfare recipients, Regenstein, Meyer, and Hicks (1998) found that employers place priority on a series of soft skills such as attitude, reliability, punctuality, friendliness, and dress styles. Two workers who are similar in terms of educational or training credentials may differ in

terms of their command of soft skills. The evidence on this is scarce and mixed. The employer survey conducted by Regenstein et al. (1998) showed that employers who have hired welfare recipients tend to rank them well in terms of a variety of soft skills, although their ranking differs across specific soft skills. For instance, among employers who have hired welfare recipients, 33 percent describe them favorably in terms of work ethic and 48 percent in terms of dressing appropriately. However, studies using in-depth interviews have pointed out that employers stigmatize single mothers (many of them welfare recipients) as unreliable, lacking work ethic, and having that "single mother look" (Edin and Harris 1999).

Estimating The Relationship between Different Types of Workers

The first step in trying to discern the relationship in the workplace between different labor groups is to determine which labor groups we are talking about. Skill is the most important factor determining the relationship between workers. Once we obtain indicators of those skills, we can separate the workforce into fairly homogenous skill groups. Earlier studies have differentiated labor groups according to their sex, education, age, and place of birth (whether U.S.- or foreign-born). Further divisions are possible but may be constrained by sample size and data availability.

In this analysis, I identify six labor inputs according to sex, nativity, and schooling: U.S.-born men without a high school diploma, U.S.-born men with a high school diploma but less than a college degree; U.S.-born men with a college degree or more; and three similar groups of women. In addition, two other labor inputs are identified: foreign-born workers and people who received public assistance. Welfare recipients are therefore seen as a distinct labor group. Their distinctiveness may be based on work discipline, work experience, soft skills, detachment from the labor market, or a signal associated with welfare participation. Further, because of data limitations,

we can identify only individuals who were working and on public assistance during the year under analysis. Persons who were on public assistance more than a year before to data collection but working more recently cannot be identified; they are considered within their respective sex, nativity, and educational group and not within the public assistance group. Conceptually, these data limitations imply that the "welfare signal," if any, disappears with time as participants leave welfare behind and get more involved in the labor market.

The second step in finding out about the relationship between welfare participants and other workers is to select an equation depicting how the different labor groups combine to produce an output. I selected a translog production function because it has commonly been used in the labor demand literature (Grant and Hamermesh 1981, Griffin 1996, Jagger 1996, Rivera-Batiz and Schezer 1991).[3] This production function allows inputs to be separate from and in combination with each other.[4] Employers seek to maximize production subject to the costs of the inputs. The result is the demand for each type of worker that can be transformed to obtain the share of each type of worker as a function of the number of each type of worker. The share is given by the number of workers multiplied by their wage, relative to the total number of workers multiplied by their wage. One can then analyze the effect of an increase in the quantity of any type of worker, such as welfare participants, on other workers, such as men without a high school diploma. Of particular relevance are the "factor price elasticities" or the percentage change in the wages of group *j* associated with a 1 percent increase in the quantity of group *i*.

The extent to which changes in wages are observed in the labor market depends on the degree to which wages are flexible and can adjust to the changes in quantity of the different labor groups. However, it is possible that wages take time to adjust and that the immediate effect of a change in the quantity of a demographic group *i* is in the employment, or the quantity used, of

demographic group *j*. Below I present both wage effects and employment effects of an increase in the number of welfare participants.

Finding the right data to estimate the relationship between workers is a challenge. I used the 5 percent Public Use Micro-Data 1990 census to estimate the effect of welfare mothers on other workers. These data are now 10 years old; however, census data are about the only data set that has enough cases of working public assistance recipients for enough metropolitan areas to estimate the relationships of interest. That the data come from 1990 does not mean that they cannot portray the relationship of a market 8 to 10 years later. Technological change can affect the relationship between labor inputs; however, as studies using these same data show, technological change was well in place by 1990 and hence is captured in these data. Another factor that may affect the relationship between welfare participants and other workers is immigration, because so many immigrants are low skilled. But again, the presence of immigrants in the low-skilled labor market is well represented in the 1990 data, since a large number of low-skilled immigrants entered between 1980 and 1990. Another indication that using 1990 data may not be a serious limitation is that results for this type of study focusing on other workers show remarkable stability across time. Studies using 1980 data were replicated with 1990 data and produced similar results.

I constructed metropolitan-level mean hourly wages for workers 18 to 55 years old who worked during 1989. Mean hourly wages were computed based on information on annual income, annual weeks, and last week hours. Number of workers in each labor group was also calculated for each metropolitan area. The 1990 census identified 273 metropolitan areas. The estimated regression equations for each labor group i was the following:

$$S_i = \hat{a}_i + \sum_{j=1}^{k=7} \hat{a}_{ij} \ln L_{ij} \quad i = 1..7 \qquad (1)$$

The âs in this equation are directly related to whether inputs are substitutes (â<) or complements (â>). This equation can be manipulated to produce the factor price elasticities, which gives the percentage change in the wages of group *j* associated with a 1 % increase in the quantity of labor group *I*.[5]

The Share of Workers in the Workforce

Table 4 shows the share that each demographic group represented among workers in 1989. I also calculate shares using the 1998 March Current Population Survey (1997 wage and employment data). Public assistance recipients were only 1 percent of all workers in 1989. While we showed above that the labor market involvement of welfare participants is growing, it is worth noting that in 1997 welfare recipients still accounted for only 1 % of the workforce. The low share of welfare recipients is due to their low proportion among workers coupled with their low hourly wages.

Between 1989 and 1997, the workforce share of low-educated U.S.-born women and low-educated U.S.-born men declined to 1 and 3 percent respectively. This is not surprising, since the number of U.S.-born workers with less than a high school degree is dropping considerably (Enchautegui 1998). The growth in low-educated labor is due to immigrants. The share of immigrants of all educational levels increased from 6 to 11 percent between 1989 and 1997.

Estimated Effects of Welfare Mothers on Other Workers

Table 5 shows factor price elasticities computed from equation 1. The diagonal contains the own-group elasticity. Looking at this diagonal one can see that of all the demographic groups, the most sensitive to the changes in their own quantity are U.S.-born females with less than a high school degree. The elasticity of -.22 indicates that a 10 % increase in the quantity of low-educated women leads to a decline in their wages of 2 percent. After low educated women, in terms of sensitivity to changes in their own quantity, come welfare recipients. An increase of 10 % in the quantity of working welfare recipients leads to a decline of 1.5 % in their own wages.

The last column of table 5 shows the effect of an increase in the number of welfare participants on the various labor groups. Most notable by its size and its statistical significance is the effect on men with very low levels of education. An increase of 10 % in the quantity of working welfare recipients could drive down the wages of U.S.-born men without a high school diploma by .3 percent. The negative effects on low-skilled U.S.-born men, even if small, agrees with earlier studies showing low-skilled U.S.-born men as a vulnerable demographic group and the most affected by changes taking place in the labor market.

There is also some substitution between women with less than a college degree and welfare participants, but this effect is much smaller than the effect on low-skilled U.S.-born men. The remaining effects are not statistically different from zero.

It is surprising that there are no discernible negative effects of the public assistance group on low-skilled women. If like inputs are more likely to substitute for each other, one would have expected low-skilled women to substitute for welfare participants. To further investigate this issue, I produced ancillary tabulations on occupations for welfare recipients: low-skilled U.S.-born men and low-skilled U.S.-born women (not in table). Certainly, in 1990, low-skilled U.S.-born men

and welfare recipients are in very distinct occupations. To illustrate, 72 percent of the population would have to be redistributed to achieve occupational equality between low-skilled men and welfare recipients. About 20 percent would have to be redistributed to achieve parity between welfare recipients and low-skilled women.

Possibly the substitution obtained between welfare recipients and low-skilled U.S.-born people reflects ongoing patterns of industrial rearrangements. Note that the estimates obtained here do not come from the production process of a particular industry or group of similar firms; rather they come from an aggregate of industries. Welfare recipients may be entering the newly emerging occupations of low-skilled workers while low-skilled U.S.-born men continue to concentrate in declining occupations such as machine operator and skilled blue-collar occupations. Katz and Murphy (1992) noted that between- and within-industry demand shifts favored women (along with the college educated) to the detriment of less-educated men. The entrance of a heavily female labor input such as welfare recipients likely accelerates the process of industrial rearrangement, with its consequent decline in U.S.-born males' principal occupations. Research focusing on particular service firms or industry, for instance, may show substitution among low-skilled women and welfare recipients.

The effect of welfare reform is measured by changes in the number of employed people on public assistance. As welfare mothers leave public assistance, they become part of their age/sex/nativity demographic group. It is likely that the signal associated with welfare participation disappears with continued involvement in the labor market. If this is so, welfare participants cease to be seen as welfare participants and join the labor group with whom they hold similar skills. If, with time, welfare participants become part of the female low-skilled labor group, the effect of an increase in the number of low-skilled women on low-skilled women themselves is relevant. Welfare

reform seems to be the only mechanism that could increase the number of working U.S.-born women in the labor market, since the supply of U.S.-born low-skilled workers is declining (Enchautegui 1998). Column 4 of table 5 shows these effects. If welfare reform increases the number of low-skilled U.S.-born women in the labor market, then table 5 shows that they can drive their own wages down by 2.2 percent. That is, the longer term effects of welfare reform (i.e., the effect provoked by an increase in the number of U.S. low-skilled women) is to drive down the wages of low-skilled women. The immediate effect of welfare mothers on other low-skilled women may be small because the welfare signal dominates, making these two groups poor substitutes for each other. Effects of low skilled U.S.-born women on other labor groups are trivial by comparison.

Welfare mothers are also joining the 12 to 15 years of education labor group, as demonstrated by their educational characteristics shown in table 2. However, one cannot be sure that a growth in this educational group can be attributed to welfare reform, because more and more women in general are entering college.

There is no evidence of complementarity. The idea that welfare mothers may complement the work of better educated women by, for instance, providing child care and housework, is not supported in these data. Although there may be instances of such complementarity, it does not seem to be strong enough to be manifested in the aggregate. Apparently, welfare workers will concentrate in sectors where low-skilled labor dominates the production process.

The effects discussed so far assume that changes in quantity affect the wages of various labor groups and hence that wages are flexible with respect to changes in quantity. If in the short run, wages are fixed, the effect of an increase of welfare recipients will be felt on the employment of

low-skilled men. I found that a 10 percent increase in the quantity of welfare mothers may lead to a decline of 2 percent in the employment of low-skilled men.[6]

The labor supply of workers with less than 12 years of education is declining, but this decline masks distinct patterns of change between U.S.-born and foreign-born workers. The labor supply of U.S.-born high school dropouts has declined by one-third, but that of immigrants has doubled (Enchautegui 1998). Since immigrants are flooding the low-skilled labor market, the question arises of whether welfare reform policies and immigration policies are in contradiction with each other. Some local observers argue that opportunities taken by immigrants should be preserved for ex-welfare mothers.

My estimates do not support the claim that immigrants take wage opportunity away from welfare participants. My estimate of the effect of an increase in the quantity of immigrants on public assistance recipients does not differ statistically from zero. In fact, the relatively small standard error suggests some degree of complementarity.

Looking to the Future

This analysis started with the premise that welfare reform will add workers to the labor force through time limits and joint work-welfare activities, and by making welfare less attractive. Addition of these new workers to the labor force may have an impact on the wages and employment of non welfare workers already in the labor market. Estimates based on pre-1996 trends suggest that in 1997 welfare reform added 287,000 workers to the labor force. Examination of the educational attainment of welfare mothers suggests that a large number of the newly added workers do not have a high school diploma.

This study revealed three main findings regarding the effects of welfare mothers on other workers. First, welfare reform may have a negative effect on the wages and employment of low-

skilled men. Second, the longer term effects of welfare reform are larger than the short-term effects. In the long run, welfare reform increases the number of low-skilled U.S.-born women in the labor force, driving down their wages. Finally, immigration, which accounts for the growth in low-skilled labor in the U.S. is not a threat to the success of welfare mothers in the labor market.

In the long run, the largest effect of welfare reform is the toll it may impose on low-skilled women. A wage decline of 2.2 percent is possible. Earlier work has forecasted a bleak economic future for welfare mothers in the labor market, mainly because of the limited wage and employment opportunities for workers with their characteristics. The analysis performed in this paper suggests that this future could get worse as welfare reform increases the number of low-skilled women in the labor market.

My finding of no competition between immigrants and welfare mothers agrees with earlier studies showing no major negative effects of immigrants of native-born workers (Borjas 1987, Enchautegui 1995, LaLonde and Topel 1991). A better line of inquiry on the topic of immigrants and welfare reform may be the consequences of welfare reform for immigrant women themselves, because a significant share of them rely on public assistance.

The discourse with the passage of PRWORA focused on budget considerations and the long-term well-being of welfare mothers. The findings of this study suggest that discussions about effects of welfare reform should consider the low-skilled labor market and its functioning in a comprehensive manner. Discussions should be expanded beyond the effects on welfare mothers themselves to the effects on other workers, the determination of wages and employment, and industrial changes affecting low-skilled labor. A comprehensive view of the functioning of the low-

skilled labor market can add significantly to our understanding of the repercussions of the 1996 welfare reform.

Endnotes

1. This statistic comes from the March Current Population Survey 1998. Only women who were householders, primary individuals, or wives are part of this figure.

2. As an illustration of this point, see discussion by Frey (1996) regarding how the failure to see negative effects of immigration may be attributed to the out-mobility of U.S.-born low-skilled workers.

3. The translog production function is (Q = production, L = labor inputs)

$$lnQ = \ln\alpha_o + \sum_{i=1}^{i=n} \alpha_i \ln L_i + 1/2 \sum_{i=1}^{i=n} \sum_{j=1}^{j=n} \beta_{ij} lnL_i lnL_j$$

4. Capital is excluded from these estimations. Capital series for all industries by metropolitan area are not readily available for 1980 or 1990. If capital is separable from other inputs–that is, if it enters the production process by itself–the effect on the estimated relationship is not important. Some authors have found separability and others have rejected it. Hamermesh (1993) and Bernt (1980, as cited in Grant and Hamermesh 1981) caution that the omission of capital if it is not separable from other inputs may lead to overestimation of cross-price elasticities and underestimation of own-price elasticities. Estimations about the relationship between welfare recipients and other labor inputs obtained in this paper should be interpreted with this caveat.

5. Derivation of the formulas for elasticities of factor complementarity and factor prices can be found in Hamermesh (1993). The formulas of elasticities of factor complementarity and factor prices are the following:

$$C_{ij} = \frac{(\beta_{ij} + S_i S_j)}{(S_i S_j)}$$

$$C_{ii} = \frac{\beta_{ij} + S^2{}_i - S_i}{S^2{}_i}$$

$$C_{ij} = \frac{\Delta q_i / q_j}{\Delta w_i / w_j} \equiv (elasticity\ of\ factor\ complementarity)$$

$$\eta_{ij} = S_j * C_{ij} \equiv elasticity\ of\ factor\ prices$$

6. To find the employment effects I used the following equation:

$$\frac{\ddot{a}\ln X_j}{\ddot{a}\ln X_i} = -\frac{S_i C_{ij}}{S_j C_{ii}}$$

For definitions of S, C see endnote 5.

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Figure 1. Number of Women on Welfare and in the Labor Market

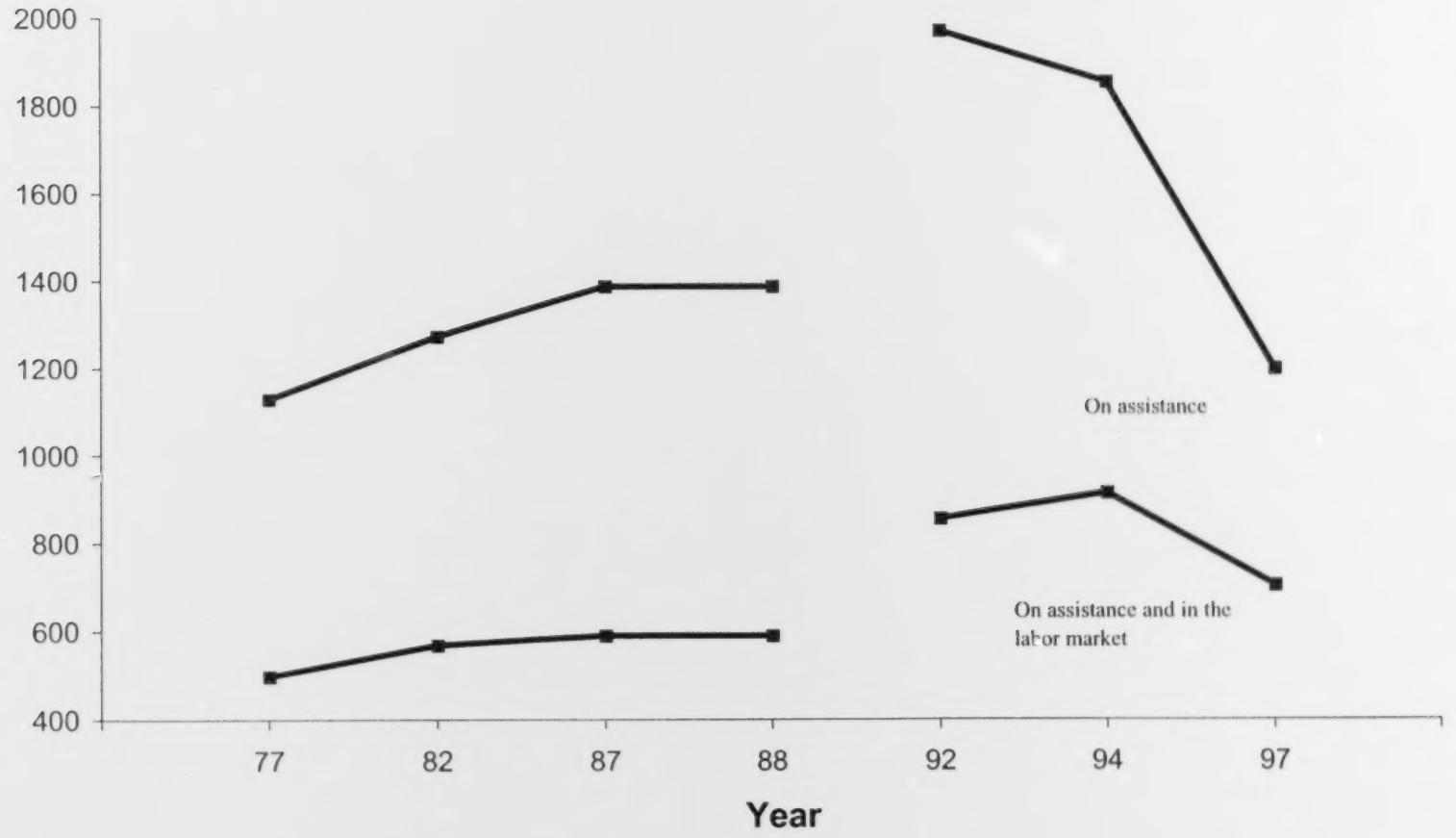

Table 1. Labor Force Participation during the Year of Selected Groups of Women Ages 18 to 54 with Preschool-age Children: Various Years 1977-1997(%)

	1977	1982	1987	1992	1994	1997
All	56	62	67	68	71	72
On Public Assistance	44	45	43	43	49	59
Single	45	43	43	42	51	62
Not on Public Assistance	57	64	70	72	74	74
Married	55	62	67	68	71	71
Less than high school diploma	51	53	56	48	46	51
Single	72	63	64	66	70	78
Less than high school diploma	51	46	46	41	49	59

Source: Current Population Surveys March Supplement 1978 to 1998.

Notes: The labor force participation is defined as the proportion who worked at least one week, was laid off, or looked at all during the year, divided by the total population under consideration. On public assistance refers to having received AFDC/TANF or other cash assistance, excluding Supplemental Security Income, during the year.

Table 2. Estimated Growth in the Labor Force Due to Welfare Reform

Increase in labor force due to cases that were pushed out or averted		
1996 number of women in welfare, ages 18 to 54, with children ages 0 to 5		**1,488,400**
1997		
Base population: women 18 to 54, with children ages 0 to 5		14,670,000
% women in welfare actual		8.2
Number of women in welfare actual		**1,199,600**
% women in welfare expected based on prereform years		9.6
Number women in welfare expected based on prereform years (actual*.096)		**1,408,320**
1996-97 change in number of women on welfare, actual		**-288,800**
Expected change in number of welfare women due to the economy	(1997 expected minus 1996 actual)	-80,080
Change in welfare numbers due to welfare reform	(1997 actual minus 1997 expected)	-207,820
	(decline due to welfare reform*.67)	**139,239**
Increase in labor force due to concurrent welfare use and labor force participation		
1996		
Number of women on welfare		1,488,400
Number of women on welfare and in the labor force		804,000
1997		
Number of women on welfare		1,199,600
Actual labor force participation rate of women on welfare		0.6
Actual number of women on welfare and in the labor force		704,000
Expected labor force participation rate of women on welfare*		0.5
Expected number of women on welfare and in the labor force		587,000
Labor force increase due to welfare reform	(1997 actual minus 1997 expected)	**117,000**
TOTAL		**256,239**

* Expected rates are obtained using the prewelfare reform rate (the average pre-1996 rate).

Table 3. Educational Attainment of Women 18 to 54 with Children Ages 0 to 5 by Public Assistance Status: Selected Years 1977 to 1997

	1977	1982	1987	1992	1994	1997
On public assistance						
% without a high school diploma	59	53	48	39	38	41
% with high school diploma only	35	40	43	40	37	38
% with some college or college graduates	5	7	8	21	25	21
Not on public assistance						
% without a high school diploma	26	20	18	11	12	12
% with high school diploma only	47	47	44	35	31	30
% with some college or college graduates	27	33	37	54	57	58

Source: March Current Population Surveys 1978,1983,1988,1993,1995,1998.

Table 4. Share* of Labor Types 18 to 54 in 1989 and 1997

	1989	1997	1997
Men with less than high school diploma, U.S.-born	0.06	0.03	0.03
Men with high school diploma and some college, U.S.-born	0.32	0.29	0.29
Men with 4 years of college, U.S.-born	0.18	0.20	0.20
Women with less than high school diploma, U.S.-born	0.03	0.01	0.01
Women with high school diploma and some college, U.S.-born	0.22	0.21	0.20
Women with 4 years of college, U.S.-born	0.11	0.14	0.14
Foreign-born	0.06	0.11	0.11
On public assistance	0.01	0.01	0.01
Total	100%	100%	100%

*Labor share is calculated as the proportion of the number of workers in labor group i multiplied by mean hourly wage of workers in labor group j, divided by the summation of the number of workers in each group multiplied by their mean hourly wage.

The first seven labor groups exclude people on public assistance.

Numbers may not sum to 100% due to rounding.

Table 5. The Percentage Change in the Wages of Labor Group i with Respect to A 1% Increase in the Quantity of Group j

	With respect to a 1% change in the quantity of:							
	Men <12 U.S.-born	Men 12-15 U.S.-born	Men >=16 U.S.-born	Women <12 U.S.-born	Women 12-15 U.S.-born	Women >=16 U.S.-born	Foreign-born	On public assistance
% Change in the wages of:								
Men, less than high school diploma, U.S.-born	-0.015 *	0.149	-0.144 *	0.068	-0.226 *	0.037	0.098	**-0.031** *
Men, high school diploma/some college, U.S.-born	0.028	0.066 *	-0.041 *	-0.036 *	-0.047 *	-0.032 *	-0.01 *	**0.012**
Men, 4 year college, U.S-born.	-0.049 *	-0.073 *	0.079 *	0.03	0.063 *	-0.039 *	-0.014 *	**0.003**
Women, less than high school diploma, U.S.-born	0.147	-0.407 *	0.189	**-0.226** *	0.383	-0.175 *	0.019 *	**0.043**
Women, high school diploma/some college, U.S.-born	-0.063 *	-0.069 *	-0.052 *	0.05	0.058 *	-0.031 *	0.022 *	**-0.017** *
Women, 4 year college, U.S.-born	0.021	0.095 *	-0.067 *	-0.047 *	-0.064 *	0.034 *	0.002 *	**0.008**
Foreign-born	0.099	-0.057 *	-0.045 *	0.009 *	0.081 *	0.004 *	-0.073 *	**-0.055**
	-0.174 *	0.375	0.065	0.114	-0.342 *	0.085	-0.309	**-0.149** *

Notes:* denotes statistical significance at least at the .1 level. The statistical significance applied are those of the coefficients of the regression equation. The base of these estimates were obtained from the coefficients of the regression equation (1) in the text, with manipulations to obtain the elasticities of factor complementarity and factor prices using the formulas in endnote 5. These figures are factor price elasticities.

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33